UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,383	12/27/2001	Christopher Pasqualino	13311US02	8696

23446 7590 06/03/2008

MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER	
YENKE, BRIAN P	

ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
06/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/034,383	PASQUALINO ET AL.	
	Examiner	Art Unit	
	BRIAN P. YENKE	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment (03/20/2008)*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-12,15,16,18,19,22-24 and 26-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *all the above* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are not persuasive.

Applicant's Arguments

a) Applicant states that Kim teaches transmitting and receiving digital audio data over the same uncompressed digital link as the video data, and does not disclose "concatenating audio data onto said at least one of said color components".

Examiner's Response

a) The examiner disagrees. Initially the examiner notes the only mention of concatentating audio onto a color component was disclosed in originally filed claim 25 (now cancelled). There is no disclosure supporting why this was not possible prior to the invention. Thus the examiner's position is that based upon the prior art which discloses transmitted audio and video together (where they are linked), since obviously synchronization between the two is required for a proper picture/sound, the linking of audio onto the same stream/signal/component as the video is conventional in the art, whereby the linking provides the expected result of linking such data. In the event the applicant disagrees and asserts that linking audio onto video provides unexpected results (in view of the Supreme Courts decision in KSR vs Teleflex) the examiner requests the applicant to clarify such in order to expedite prosecution.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2a. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being obvious over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display. As described the interface includes circuitry for “encoding" video for transmission between the controller/pc system and its CRT display, wherein the interface includes:

1) A multiplexer for concatenating at least one data (e.g. that which represents horizontal sync, vertical sync, and/or the serial data channel signal/command data) the red, green, blue, and

2) A block code arrangement for balancing the entire multiplexed data stream, via the utilization only “balanced" codes, thereby eliminating low frequencies from the spectrum" while permitting 'AC coupling'.

Although, the concept of adding additional bits to an existing sequence/component in order to proper DC balance it was known to add additional bits to ensure proper DC balancing of the encoded signal for proper AC coupling the examiner nonetheless incorporates Copeland (see background/prior art discussion).

Therefore, it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to modify the IBM disclosure which encodes video for transmission and permits AC coupling to add additional bits as done conventionally (Copeland discussion on Prior Art) for the advantages as noted above.

Regarding the newly amended concatenating audio data onto said at least one color component. As stated in the previous rejection IBM describes an interface which includes circuitry for “encoding" video for transmission between the controller/pc system and its CRT display. Thus although, IBM/Copeland does not explicitly recite “audio”, the examiners position is that video/audio are conventionally transmitted/received together for display/listening.

The examiner will rely upon applicant’s submitted XP-002202474, which evidences the concept of linking/concatenating the audio with video in a DVI link system.

Therefore it would have been obvious to one of ordinary skill in the art to modify IBM/Copeland which discloses a interfacing/system method between a controller/pc system and a CRT display by linking the audio and video data (color component) together as done by XP-002202474 in order to provide the consumer the conventional ability to view and listen to desired programs.

Regarding the new amended “…during the blanking interval”, although the above cited combination does not explicitly recite this feature, the examiner will evidence the concept of sending information including side channel information during the blanking period.
Kim discloses the concept of sending side-channel data during inactive data (blanking interval) over a high speed digital communication link (video link, DVI). It is also noted that captioning data also is conventionally transmitted during the blanking portion of a video signal. T herefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination above, which discloses encoding video as stated above, by providing the audio data (side channel information) during the blanking interval as done conventionally to utilize the link's bandwidth during data blanking periods.

2b. Claims 3 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect the limitations of claim 1.
Claims 3 and 7-11 differ from the system described in the technical disclosure only in that said claims recite steps for correcting the video signal for erroneous pixels caused by transmission errors via various forms of pixel replacement (i.e. via replacement with a previously received correct value or a value obtained by the interpolation/averaging of surrounding correct pixel
values);

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

Copeland (col 4, line 1-20) discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.

2c. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.
Claims 6 differs from the system described in the technical disclosure only that said claims specify said concatenated data as being “status" data/information.

The examiner maintains that would have been obvious to one of ordinary skill in the art to have used the “data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound or status information).

2d. Claims 12, 18, 21, 22, 23, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.

The claims differ from the system described in the technical disclosure only in that the claim indicates that the data component to which at least one obtained by “splitting" component out from input data. The IBM disclosure does not specify the source of the red, green, blue, and intensity video component described concatenated therein.

The examiner takes Official Notice that it was notoriously well known in the art for the video that’s transferred between a controller/PC and its CRT display to have been originated from a composite signal source thereby requiring the splitting" the video components prior to transmission. The examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized the interface described the IBM disclosure to have “split" and conveyed data from such conventional source as was known in the art.

Regarding the audio limitation/transmitting…see claim 1 above.

2e. Claims 15 and 16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 12.

Claims 15 and 16 differ from the system described in the technical disclosure only in that said claims recite he addition of CRC codes to the transmission

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

The examiner relies upon Copeland (col 4, line 1-20) which discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.

2f. Claim 24 is rejected under 35 U.S.C. l03(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 22.

Claim 24 differs from the system described in the technical disclosure only in that said claim recites the addition of CRC codes to the transmission;

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

The examiner relies upon Copeland (col 4, line 1-20) which discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.

2g. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its display as was set forth above with respect to the limitations of claim 12.

Claim 19 differs from the system described the technical disclosure only in that said claims specify said concatenated data as being "status" data/information.

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have used the "data channel" the interface described the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e.
be it sound/audio or status information).

3h. Claim 27 is rejected under 35 U.S.C. l03(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 22.

Claim 27 differs from the system described in the technical disclosure only in that said claims specify said concatenated data as being "status" data/information.

The examiner maintains that it would have been obvious to use the "data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner's work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, David L. Ometz, can be reached at (571)272-7593.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571)-273-8300

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

General information about patents, trademarks, products and services offered by the United States Patent and Trademark Office (USPTO), and other related information is available by contacting the USPTO's General Information Services Division at:

800-PTO-9199 or 703-308-HELP

(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS). PAIR (http://pair.uspto.gov) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.

/BRIAN P. YENKE/
Primary Examiner, Art Unit 2622

B.P.Y
30 May 08